High-speed type GPIB communication card for CardBus

GP-IB(CB)F, GP-IB(CB)FL

The photograph is GP-IB(CB)F.

Model	Name	Bus analyzer function
GP-IB(CB)F	High-performance and high-speed type GPIB communication card	O
GP-IB(CB)FL	Low price High-speed type GPIB communication card	None

* Specifications, color and design of the products are subject to change without notice.

These products are multi-function, high-speed GPIB communication card that complies with IEEE-488.1 and IEEE-488.2. The card is a PC Card Standard compliant CardBus card with support for bus master operation. The card can be used to control communications with devices that support the GPIB interface and perform GPIB bus line data analysis on any PC that has a PC Card Standard compliant CardBus Type II PC card slot.
You can use the supplied driver library to develop application software using any programming language that supports the Win32 API routines (such as Visual Basic or Visual C++), or using LabVIEW.

Features

Complies with the IEEE-488.2 standard
As the card complies with the IEEE-488.2 standard, you can control any external device that supports this standard.

Data transfer speed 1.5Mbyte/sec max.
The maximum data transfer speed for communications is 1.5Mbyte/sec.

Supports bus master operation
The bus master data transfer function enables large quantities of data to be transferred between the PC Card and PC without loading the CPU.

Internal 2Kbyte FIFO buffers for send and receive
The PC Card has separate 2Kbyte FIFO buffers for sending and receiving data, allowing both small and large volumes of data to be transferred at high speed.
Interface messages also use a FIFO to enable high-speed transmission.

Built-in GPIB bus analyzer function [GP-IB(CB)F]
The PC Card features a bus analyzer function.
This not only allows the signals on the GPIB bus to analyzed, but also permits signal analysis to be performed while the PC card is performing GPIB communications

Built-in SPAS event function
In addition to the functions of the earlier GPIB controller (μPD7210), the PC Card also supports the SPAS event generated when a serial poll occurs. This gives you a high level of flexibility in constructing your system.

Internal high-precision timer
The PC Card includes a high-precision application timer to allow accurate time monitoring to be performed from Windows.

Long term availability
As the PC Card uses a high-speed GPIB controller developed by CONTEC (upwardly compatible with the μPD7210), reliable long term availability is ensured.

Diagnostic program
A diagnostic program is supplied to support system development. The diagnostic program can be used to check hardware operation (interrupts and I/O addresses) and to perform simple communication tests with connected devices.

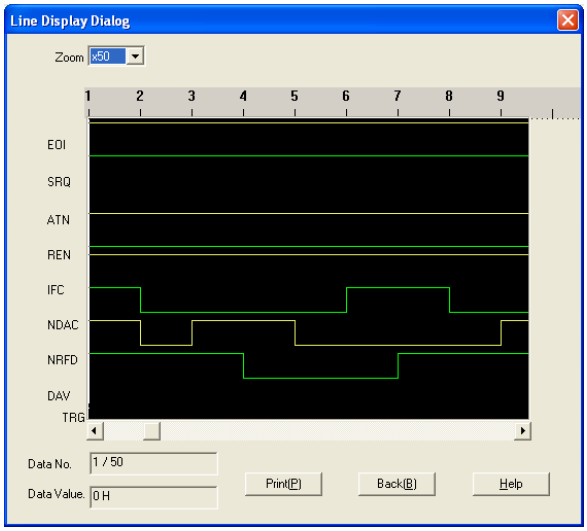
Other
A function is provided to read all control lines and data lines. This enables various operations to be performed from the application. [Includes control line latch function.]

Additional Functions

Line monitor function
The states of all control lines (IFC, ATN, SRQ, REN, EOI, DAV, NRFD, and NDAC) can be read. The latch data can also be read. You can also read the current state of the data lines (DIO1 to DIO8).

Communication using FIFO memory
The PC card can use on-board FIFO memory for communication. As the PC card controls this form of communication, it can be performed at high speed irrelevant to the PC's CPU speed.
Note, however, that the actual communication speed is set to the speed of the slowest device in compliance with the GPIB standard.

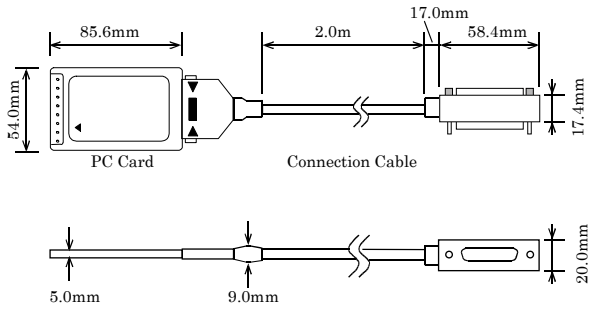
Analyzer function (GP-IB(CB)F)
The state transition of all lines in the GPIB cable can be analyzed by using the on-PC Card FIFO memory. (A maximum of 64K data items can be collected.)
This function can be used to locate the cause of a failure or to check data flowing on lines.
The function is provided by the analyzer utility (Analyzer.exe).



Specification

Item	GP-IB(CB)F	GP-IB(CB)FL
GPIB		
Number of channel	1ch Conforms to IEEE-488.1, 488.2(GPIB)standards	
Transfer format	8-bit parallel, 3-wire handshake system	
Transfer rate	1.5Mbyte/sec	
Data buffer size	2Kbyte send, 2Kbyte receive	
Signal logic	Negative logic L level : 0.8V or less, H level : 2.0V or more	
Cable length between device	4m or less	
Total cable length	20m or less	
Connectable number of device	15 devices (Max.)	
Analyzer buffer size	64K data points (1 data point: Control signals + DIO1 to 8)	None
Bus master section		
DMA channels	2ch	
Transfer bus width	32-bit	
Transfer data length	8 PCI Words length (Max.)	
Transfer rate	80Mbyte/sec	
Scatter/Gather function	64Mbyte/ch	
Common section		
I/O address	Any 128-byte boundary	
Interrupt	1 level use	
Consumed current	3.3VDC 400mA (Max.)	
Operating conditions	0 - 50°C, 10 - 90%RH (No condensation)	
Length of supplied cable	2.0m	
PC card slot specifications	PC Card Standard CardBus	
Card size	TYPE II	
Weight	40g (250g including cable)	

Physical Dimensions



Support Software

NOTE:
This hardware does not support Windows 95 and Windows NT4.0/3.51.

Driver Software Package API-PAC(W32) (Bundled)

API-PAC(W32) is the library software that provides the commands for CONTEC hardware products in the form of Windows standard Win32 API functions (DLL). It makes it easy to create high-speed application software taking advantage of the CONTEC hardware using various programming languages that support Win32 API functions, such as Visual Basic and Visual C++.
It can also be used by the installed diagnosis program to check hardware operations.
CONTEC provides download services (at http://www.contec.com/apipac/) to supply the updated drivers and differential files.
For details, read Help on the bundled CD-ROM or visit the CONTEC's Web site.

< Operating environment >

OS Windows XP, Server 2003, 2000, Me, 98, etc..

Adaptation language Visual C++ .NET, Visual C# .NET, Visual Basic .NET, Visual C++, Visual Basic, Delphi, C++Builder, etc..

API-GPLV(W32) library supporting LabVIEW (Bundled)

API-GPLV(W32) is a driver created according to the National Instruments Corporation's GPIB function style. The driver is software to control the CONTEC GPIB board (PC Cards) using a LabVIEW-based GPIB system or existing application program.
It can also be used by the installed diagnosis program to check hardware operations.
CONTEC provides download services (at http://www.contec.com/gplv/) to supply the updated drivers and differential files.
For details, read Help on the bundled CD-ROM or visit the CONTEC's Web site.

< Operating environment >

OS Windows XP, Server 2003, 2000, Me, 98, etc..

Adaptation language LabVIEW, Visual C++ .NET, Visual C# .NET, Visual Basic .NET, Visual C++, Visual Basic, Delphi, C++Builder, etc..

Linux version of general-purpose count driver: API-GPIB(LNX)
(Supplied: Stored on the API-PAC(W32) CD-ROM)

This driver is used to control CONTEC GPIB boards (PC Cards) from within Linux.
You can control CONTEC GPIB boards easily using the shared library called from the user application, the device driver (module) for each kernel version, and the board (PC Cards) configuration program (config).
CONTEC provides download services (at http://www.contec.com/apipac/) to supply the updated drivers and differential files.
For details, read Help on the bundled CD-ROM or visit the CONTEC's Web site.

< Operating environment >

OS RedHatLinux, TurboLinux, etc..
(For details on supported distributions, refer to Help available after installation.)

Adaptation language gcc, etc..

Cable & Connector

Cable (Option)

GPIB cable (2m) : PCN-T02

GPIB cable (4m) : PCN-T04

Connector (Option)

GPIB Connector : CN-GP/C
This is useful if the cable used to connect to the instrument or other device is obstructed by the device's case.

* Check the CONTEC's Web site for more information on these options.

Packing List

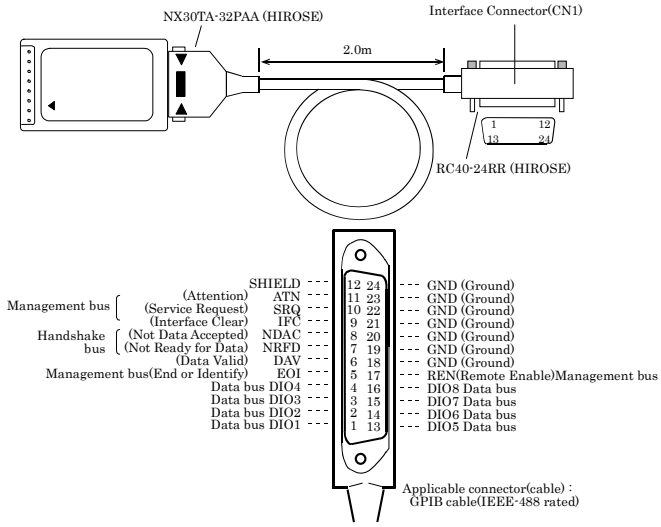
PC Card(One of the following)
[GP-IB(CB)F or GP-IB(CB)FL] …1
First step guide … 1
CD-ROM *1 [API-PAC(W32)] …1
Connection Cable (CB-GPIB) …1
PC-Card Attachment(CARD-AT1) …1set

*1 The CD-ROM contains the driver software and User's Guide.

How to connect the connectors

Connector shape

Use the interface connectors on the CB-GPIB cable to connect to external devices.



* Please refer to page 2 for more information on the supported cable and accessories.